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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE  
BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

In re Application of: Sosa

Serial No.: 10/723,656

Confirmation No.: 8871

Filed: November 26, 2003

For: Use of Tetrafunctional Initiators to  
Improve the Rubber Phase Volume  
of HIPS

§ Atty. Dkt. No.: COS-919

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§ Group Art Unit: 1711

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§ Cust. No.: 25264

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§ Examiner: Asinovsky

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Mail Stop Appeal Brief-Patents  
Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Dear Honorable Commissioner:

CERTIFICATE OF MAILING	
37 CFR 1.10	
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<u>6/5/07</u> Date	<u>[Signature]</u> Signature

TRANSMITTAL LETTER AND FEE AUTHORIZATION

In connection with the above identified application, Applicants respectfully submit the following documents:

1. Reply Brief.

The Commissioner is authorized to charge the fee of \$500.00, along with any additional fees that may be required for this submission, or credit any overpayments, to Deposit Account No. 03-3345.

Respectfully submitted,

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REPLY BRIEF

Appellants submit this Reply Brief to the Board of Patent Appeals and Interferences in response to the Examiner's Answer dated April 13, 2006.

Argument

**THE EXAMINER ERRED IN REJECTING CLAIMS 1-36 UNDER 35 U.S.C. §103(a) AS BEING UNPATENTABLE OVER *KRUPINSKI* BECAUSE *KRUPINSKI* DOES NOT TEACH, SHOW OR SUGGEST A COPOLYMERIZED PRODUCT HAVING A G/R THAT INCREASES AS SWELL INDEX INCREASES.**

Claims 1-36 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Krupinski. The Examiner states that "the difference between the present claims and each cited patent" (collectively *Krupinski*) "is the requirement in the present claims that a resulting copolymerized product has a ratio of % gel to % rubber (G/R) that increases as swell index increases". See, Examiner's Answer at page 7, last paragraph. However, the

Examiner states that “it would have been obvious to one of ordinary skill in the art to consider that the ratio of % gel to % rubber can be obtained in each patent to *Krupinski* invention because each reference discloses a process for making HIPS wherein the process conditions are controlled by the residence time and the reaction temperature in the presence of the same tetrafunctional peroxide initiator and the amount of said tetrafunctional initiator and the amount of rubber polymer.” See, Examiner’s Answer at page 8. Appellants disagree.

That which is inherent in the prior art, if not known at the time of the invention, cannot form a proper basis for rejecting the claimed invention as obvious under 103. See, *In re Shetty*, 566 F.2d 81, 86, 195 U.S.P.Q. 753, 756-57 (C.C.P.A. 1977.)

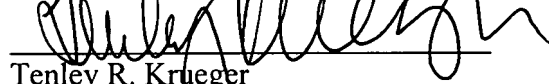
Appellants submit that the fact that utilizing multifunctional initiators to form a polymer wherein the G/R ratio increases as the swell index increases was not known at the time of the invention and therefore is not obvious over *Krupinski*. In fact, the opposite was believed at the time of the invention. As previously presented, such an effect (e.g., G/R increasing as swell index increases) was not known at the time of the invention and in fact the contrary was believed. See, *Impact Polystyrene: Factors Controlling the Rubber Efficiency*, E.R. Wagner and L.M. Robeson, Rubber Chem. Tech., Vol. 43, pp 1129-1137, at 1131-1132 and 1135-1136 and U.S. Patent No. 6,703,460 (*Blackmon*) at Table III. This is further demonstrated by Appellant’s own examples wherein the mono and bifunctional initiators exhibit the conventional trend wherein the swell index decreases as the G/R ratio increases. See, Specification at least Table IV.

Further, it is improper, to use that which the inventor taught against its teacher. See, *In re Lee*, 277 F.3d 1338, 1343, 61 U.S.P.Q.2d 1430 (Fed. Cir. 2002). The Examiner states that “the claimed ‘increase the swell index’ will occur in each *Krupinski* invention for being similar to the present claims in the absence of evidence to the contrary.” See, Examiner’s Answer at page 8, last paragraph. Appellants again assert that the Examiner has no support for such a position absent the Appellant’s own specification. In fact, the references available to the Examiner support the opposite conclusion. Accordingly, Appellants respectfully request reversal of the rejection.

### Conclusion

In conclusion, *Krupinski* nowhere teaches or suggests recovering a copolymerized product that has a ratio of % gel to % rubber (G/R) that increases as swell index increases, such as recited in the pending claims. Thus, Appellants respectfully request reversal of the rejections of claims 1-36.

Respectfully submitted,



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## **Appendix A**

### *Additional Evidence*

1. *In re Lee*, 277 F.3d 1338, 61 U.S.P.Q.2d 1430 (Fed. Cir. 2002).